

COMPARISON OF FRESHMAN COMPOSITION
COURSES BY TELECOURSE AND
ON-CAMPUS SECTIONS

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CHAPTER I

INTRODUCTION

College credit courses aired via cable and public television were largely a development of the seventies (Zoglin, 1981 and Alger and Linn, 1976). Tulsa Junior College became the first college in Oklahoma to schedule telecourses in 1979. That year the college offered five telecourses leased from Dallas County Community College District. In the spring of 1984, the college placed 13 telecourses developed by seven producers on its schedule. At least eight other colleges and universities in Oklahoma offered college credit courses by cable and public television and that same semester.

Sutterfield (1981) conducted a research study for the purpose of evaluating and analyzing perceptions of faculty, students, and administrators involved with telecourses. The result of that study was to aid in the decision-making process related to telecourses. The administrative decision was to increase offerings; however, further research was suggested. This study was conducted as a continuation of the Sutterfield study and focused on Freshman Composition.

Problem Statement

The Sutterfield (1981) study focused on perceptions and student demographic information for all telecourses offered during the spring semester of 1981. Therefore, the analysis of grade results was based

on a single course within one semester. The problem of this study developed from the need to know if grade results in Freshman Composition II were affected by the mode of instruction, telecourse or on-campus, in the prerequisite course.

Purpose of Study

The purpose of this study was to compare the grades earned in Freshman Composition I by telecourse and on-campus students and the grades earned by the same students in the sequential Freshman Composition II course. The study sought to answer the following questions:

1. What grades were earned by Freshman Composition I telecourse students and how did those grades compare to grades earned by on-campus students?
2. What was the mean grade earned by on-campus Freshman Composition I students in courses taught by the same instructors who coordinated telecourses and the mean grade earned by telecourse students?
3. How did grades earned in the second course by students in the telecourse group compare to those earned by the on-campus group?
4. Was there a relationship between the grades earned in Freshman Composition I and Composition II?
5. Did students who withdrew from or failed composition initially re-enroll in composition or other courses at Tulsa Junior College?
6. Was there a correlation between the established grade point average and the grade earned in Composition I?
7. Were the grades earned in Composition I affected by the number of college hours previously completed by the students?

8. Did student age affect the grade earned in Composition I?

Limitations

Limitations to the study were as follows:

1. The study was limited to students enrolled in Freshman Composition I at Tulsa Junior College during the fall and spring semesters of the 1981 and 1982 academic years.
2. The on-campus Freshman Composition I students included in the study were enrolled in courses taught by the same instructors who coordinated the telecourses.

Assumptions

The following assumptions were made during the study:

1. The number of students involved in the study, 323 telecourse students and 213 on-campus students, would be sufficient for the basis of this study.
2. Since the study was limited to students in on-campus classes taught by the same instructors who coordinated the telecourse, the grading standards would be substantially the same.

Definitions

The following terms and phrases were used in reporting the study results:

Completer - student who remained in the course throughout the entire semester and received a grade of A, B, C, D, or F.

ENG 1113, Freshman Composition I - provides instruction in standard usage and essential expository writing skills. It is the first in a sequence of two freshman composition courses (Tulsa Junior College 1982-83 Catalog, p. 209).

ENG 1213, Freshman Composition II - provides instruction in standard usage and essential expository writing skills. As such it is a continuation of English 1113 (Freshman Composition I). In addition, English 1213 provides instruction in the use of secondary sources and documentation. Much of the writing in English 1213 involves analysis of various reading materials (Tulsa Junior College 1982-83 Catalog, p. 209).

Five-A (5A) - computer print-out of individual student information indicating the course section taken and grades received at Tulsa Junior College.

Grade-point Average, G.P.A. - based upon a four-point scale, the average of quality grade points divided by credit hours attempted.

Non-competitor - student who withdrew or was withdrawn by the instructor or who requested an incomplete and received a W, WP, WF, or I for the semester.

On-Campus - classes led by the instructor with face-to-face encounters with the students three hours per week.

Producer - the agency, institutions, or institutions that developed telecourses.

Supplier - the leasing agent from whom the course was rented.

Telecourse - an integrated system consisting of video programs aired by cable and public television, textbooks and/or study guides, orientations, on-campus testing, and, in some cases, mail-in assignments.

Telecourse coordinator, on-campus coordinator, and telecourse instructor - these terms were used interchangeably and referred to the Tulsa Junior College faculty member who conducted the course.

Organization of the Study

Chapter I introduced the study, presented the problem, stated the purpose, limitations, assumptions, and organization of the study. Chapter II consisted of the review of the literature which is divided into the following parts: history of telecourse use, current and expected uses, development of a typical telecourse, demographic data about telecourse students, and available research concerning the effectiveness of telecourse instruction. Chapter III reported the selection of the subjects, and collection and analysis of the data. Chapter IV included the presentation of findings and discussion of the findings. Chapter V consisted of a summary of the study, statement of conclusions, and recommendations for practice and further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

For the purpose of this study, the review of literature was organized into the following categories: (1) History of Telecourse Use; (2) Current and Expected Use; (3) Development of a Typical Telecourse; (4) Demographic Data About Telecourse Students; and (5) Available Research Concerning the Effectiveness of Telecourse Instruction.

History of Telecourse Use

Although television has been used as a medium for college credit courses for the last 30 years, the delivery system known as the telecourse was a product of the 1970's (Zoglin, 1981; Alger and Linn, 1976). Many colleges and universities brought the television camera into the classroom and broadcasted lecturers via public television. One such institution was Amarillo College which developed a "sunrise semester" utilizing live broadcasts aired at 6:00 a.m. via public television in 1958 (Sapper, 1982). However, telecourses, as the term has come to mean, did not arrive on the scene until the development of the video-cassette and the emergence of cable television.

Soglin (1981, p. 4) stated, "Television does not change the content of a course; it is simply a different delivery system." The component of that delivery system which has received the most attention has been professionally developed and produced video tapes, usually 30 in number

and one-half hour in length. She continued to say:

A true telecourse utilizes the medium of television primarily to convey that information which can best be conveyed visually, and it utilizes other methods to replace all other activities which normally take place in a classroom (Zoglin, 1981, p. 4).

The "other methods" referred to by Zoglin have consisted of the textbook, the same one or one similar to the one used in traditional courses; a study guide, designed specifically to coincide with the tapes and the textbook; on-campus orientation sessions with the course coordinator; and on-campus examinations ranging from two to five in number. In addition many telecourses have included mail-in assignments and on-campus review sessions with the coordinator. Most institutions have also utilized phone communication centers whereby students can have their questions answered by the attendant on duty or leave messages for return calls by the course coordinator.

Dallas County Community College District, Miami-Dade Community College District in Florida, and Coast Community College District, Orange County, California, emerged as leaders in the development of telecourses. Dallas (ITV Close-UP: The First Six Years, 1978) first offered American Government in 1972. Having experienced a positive reaction in enrollment numbers and student attitude surveys, the college improved the course components and leased airing rights to other colleges. A year later Dallas joined Miami-Dade in the production of an ecology series. By spring 1978, total enrollments in 14 telecourses were over 39,000 (ITV Close-Up: The First Six Years, 1978).

Coast Community College began its involvement with telecourses in 1972 also. In the spring of 1973, the college enrolled 1,300 students in three telecourses (Luskin, 1979). By spring of 1979 over 35,000

students enrolled in 12 courses offered by Coast.

Current and Expected Use

The enrollment numbers experienced by Coast and Dallas have been the exception rather than the rule. However, the number of colleges and universities offering telecourses and student enrollments have continued to increase. Statistics have varied by survey. Sigerall, O'Rourke, and Pohrte (1980) cited studies concluding that nationally 200,000 students enrolled in television courses each year. The Higher Education Utilization Study: Technical Report (1979), estimated 500,000 enrollments in 2,300 telecourses offered by 1,800 colleges and universities. During its first year of existence, the Adult Learning Service of the Public Broadcasting Service, working with 237 transmitting stations in 47 states, enrolled over 53,000 students from 555 colleges and universities (Brock, 1982). Oklahoma became the last of the states to join in this venture in the fall of 1983.

The increase in enrollments and participation by educational institutions did not come by surprise. It was facilitated by the emergence of cable systems. In 1978 there were approximately 200 cable systems in the United States; however, by 1981 that number had increased to 3,000 and estimates were 7,500 would exist by 1983 (Encyclopedia of Educational Research). In 1976 cable systems with 3,500 or more subscribers were required by the Federal Communications Commission to provide four public access channels for public, educational, governmental and leased access.

The use of telecourses has been accepted mainly at the junior/community college level. In 1977, the American Association of

Community and Junior Colleges sponsored the establishment of the Instructional Telecommunications (Zigerall, 1982). About half of the membership in this group came from multi-campus districts and multi-college consortia. The Higher Education Telecommunications Association of Oklahoma (HETA) became a member of this group in 1983. The Oklahoma association grew from the combined efforts of Oscar Rose Junior College, South Oklahoma City Community College, and Tulsa Junior College.

In 1981, the Annenberg School of Communication, founded by Annenberg publisher of TV Guide, made a \$150 million grant over the next 15 years to the Corporation of Public Broadcasting (Parnell, 1982). The primary purpose of the Annenberg Project was to develop college level courses through existing and developing delivery systems.

Technological advances allowed for the development of telecourses and additional advances. Educators have been in the position of using yesterday's knowledge to train today's students for tomorrow's society. The Green Chair Group (1982) predicted that distant education would increase greatly by the year 2001. They stated the availability of cable television, videodiscs, home computers, and interactive systems would act to change the delivery system of education. These forecasts were based in part on studies indicating that one-third of the college students today were over 25 years old and employed (Condon, 1982, p. 18) and "in some communities as many as 80 percent of the households have no members of (public) school age." The Green Chair Group proposed that further demands for distant education would come from the growth of the concept of life-long learning, acceptance of mid-life career changes, emphasis on examinations to signify course completion and competency, and increase demand for low cost and convenience to the student.

Futurists have predicted technological advancements which will have a great impact on education. One of the greatest disadvantages of telecourses has been the lack of feedback. Butler (1983) foresaw two-way cable television systems becoming wide-spread by 1983. Such a system, QUBE, has been installed in Columbus, Ohio and Houston, Texas. The University of Waterloo in Canada developed plans to use such a system which enables subscribers to talk back to the cable station by pushing response buttons that are recorded by computer (Encyclopedia of Educational Research, 1982). By 1985 Butler stated the videodiscs could be recorded locally and interactive videodiscs, combined with the microcomputer, would be used widely. Butler's predictions gained credibility earlier this year when the University of Nebraska and San Diego State University were awarded \$125,000 to continue their investigations into "production for use of interactive cable" (ITV/AACJC, 1983, p. 2).

Development of a Typical Telecourse

The procedures and steps used in producing a telecourse have increased in sophistication as availability has increased. The first course produced by Dallas was five months in the making (ITV Close-Up: The First Six Years, 1978). Seven months each were spent on the next two courses, and the next three courses took 15 months each. Coast-line Community College, as Dallas did, has employed full-time instructional designers, research publications staff, academic advisors, and production specialists. Luskin (1983) described the development of a telecourse in the following manner:

Telecourses are produced by a team of people, including instructional designers acquainted with educational technology, one or more faculty advisors, a TV producer, and various other personnel, including writers and editors of print materials, researchers, etc. Often there are special content consultants used in developing specific program content and an advisory committee to review the overall course outline, topics, and instructional objectives. In fact telecourses are produced with the specific purpose of providing the independent study student with a course comparable in content to a classroom course, if it is the purpose of the course to replicate that content (p. 50).

Luskin comments seemed to ring with the objective of replacing classroom instruction. However, he did not advocate a reduction in traditional instruction. He continued to state, "The issue is access to learning because one knows how to learn and how to be taught" (Luskin, 1983, p. 52).

Many educators and researchers have outlined considerations to be made before deciding to develop telecourses. Cobun (1982) listed several criteria that should be taken into consideration for the development of a telecourse over and above those of a traditional class. Those requirements were:

- . . . a production staff of technical specialists to produce the learning event;
- . . . appropriate equipment to record, edit, and duplicate; and
- . . . contact with learners at their teachable moments in a suitable environment (Cobun, 1982, p. 224).

Cobun continued to state,

There is misuse and waste of the potential of instructional television when:

- broadcast schedules do not coincide with scheduled instruction;
- the televised learning event is used as a surrogate for a live teacher who could and does do the task equally well; and
- the televised learning event includes hardware, materials and techniques, or other kinds of event that could take place equally well within the classroom (p. 224).

Zigerell, O'Rourke, and Pohrte (1980) concurred and added that television is not the mode of instruction to use

. . . with large amounts of information, highly detailed data, complex numbers, figures, or relationships, or with material which requires extensive time and eye-scan to comprehend (p. 18).

These three authors pointed out that telecourses would not meet the needs of all students just as traditional instruction could not. Students' needs have not been met since students have different levels of motivation and retention and varying powers of storage and recall.

Demographic Data About Telecourse Students

Numerous student demographic studies have been completed from a variety of geographic locations; i.e., North Carolina (Julian, 1982), Tulsa (Sutterfield, 1981), Orange County, California, (Luskin, 1979), and Dallas (ITV Close-Up: The First Six Years, 1978). The results of these studies have been similar in many respects. Julian found 65 percent of the enrollment was female and from 26 to 35 years of age. The Dallas study indicated the female-male ratio in enrollments to be 60 percent to 40 percent, and the average age to be 30 years. The mean age for students enrolled in the spring semester, 1981, at Tulsa Junior College was 29.52 years and the female-male ratio was 71 percent to 29 percent. The average student age at Coast was 34 years.

Thirty-five percent of the students at Coast were enrolled in only telecourses. Just under 45 percent of the students in Tulsa were taking only telecourses.

In responding to why they had enrolled in telecourses, students

in Dallas and Tulsa cited convenience and saving time, gas, and money as being the top two reasons. Sixty-six percent of the North Carolina students indicated difficulty in taking on-campus classes due to work schedules, family commitments, convenience, and transportation costs.

Student surveys have resulted in a high percentage of students expressing positive attitudes and opinions toward telecourses. Over 82 percent of the Tulsa students agreed or strongly agreed that they were satisfied with telecourses overall. Ninety percent of the Dallas students expressed positive responses and 93 percent of the North Carolina students felt the courses had met their expectations.

Available Research Concerning Effectiveness of Telecourse Instruction

In evaluating the effectiveness of telecourse instruction, most studies have compared telecourses to traditional on-campus courses. Telecourse students have a higher attrition rate than on-campus students enrolled in the same courses (California Community Colleges Independent Study: A Report to the Legislature, 1981; Sutterfield, 1981; Mount and Walters, 1980-81; Claggett, 1980; and Alger, 1976).

Both Alger (1976) and Sutterfield (1981) surveyed students who withdrew to ascertain reasons they did not complete the course. Respondents to the Alger study stated their withdrawals were due to personal difficulties rather than dissatisfaction with the course. Non-completers in Sutterfield's study stated most often that the reasons for their withdrawals were because the telecourse required more time than they anticipated and that they were unable to keep up with the assignments. As a sign of a positive attitude towards telecourses,

67 percent of the Tulsa non-completers indicated that they would take a telecourse in the future.

One of the earliest research studies comparing the performance of telecourse instruction to classroom instruction was conducted in Chicago (Erickson and Chausow, 1960). The research took into account differences in student sex, age, and previous education. Results indicated that if significant differences occurred in the performance level of the two groups, the telecourse students were often in the advantage. Chu and Schramm (1967) undertook the review of 207 published studies covering 421 comparisons between conventional instruction and television instruction. Of the comparisons, ". . . 308 showed no significant differences, 63 showed television instruction to be superior, and 50 found conventional instruction better" (p. 10). It should be pointed out that the comparisons were at the elementary, secondary, college and adult education levels. Chu and Schramm referenced 202 comparisons at the college level. No significant difference was found in 152; television instruction was found to be more effective in 22; and conventional instruction more effective in 28. Chu and Schramm (p. 12) concluded that ". . . instructional television can more easily be used effectively for primary and secondary school students than for college students." Their reasoning was that the more complex the material, the greater the need for immediate feedback which telecourse instruction lacks.

Colin, Borich, and Keel (1973, p. 4) arrived at the conclusion ". . . that complex topics can be handled by the telecourse method" following a study involving members of a dairy herd improvement association. In a three-month experiment, pre-tests and post-tests were

administered to cover knowledge through the synthesis level. An analysis of variance was used to compare test scores from the two different methods. No significant differences was found in the learning level of the two groups.

Donsky, Vaughn, Burk, and Hite (1979) conducted a study in Ohio comparing telecourse to on-campus students in introductory business courses. Students in two on-campus courses were compared to students in the telecourse. The television group earned a higher class grade point average than either of the on-campus groups. A one-way analysis of variances at the .007 level was performed using mode of instruction as the independent variable and test scores as the dependent variable. The results found "as a group, TV students had a significantly higher test score performance on the same material with the same questions than their conventional classroom colleagues" (Donsky, Vaughn, Burk, and Hite, 1979, p. 18).

The Mount and Walters (1980) study compared 73 on-campus and 134 telecourse students in general psychology. Students from both groups volunteered to participate in a personality inventory as well. The scores from the personality inventory resulted in the telecourse group tending ". . . to be more happy-go-luck, conscientious, trusting, astute, controlled, and less apprehensive" (p. 48). In comparing average test scores of the two groups, the traditionally taught students had a mean of 69.19 and the telecourse group a mean of 84.83. Having noted that the telecourse group was composed of students older than the on-campus group, the researchers conducted a one-way analysis of variance. Age was considered to be a covariate with test scores the criterion. Using a significance level of F equals .0001, the adjusted

group mean for traditionally taught students was 71.09 and for telecourse students was 83.80.

The Sutterfield (1981) study included a grade breakdown for each of eight telecourses and on-campus courses as well as a combined grade breakdown. As a total, 66.76 percent of 4,411 on-campus students ended the semester with an "A", "B", "C", and "D" grade, while only 51.74 percent of the 661 telecourse students completed the semester earning grades of a "D" or above. When Freshman Composition I was considered independently, telecourse students fared slightly better than on-campus students with 56.97 percent of the telecourse students finishing with a grade of "D" or higher compared to 55.32 percent of the on-campus students.

Sutterfield's study indicated results were quite different when considering Freshman Composition II. A little over 68 percent of 841 on-campus students finished the semester with a "D" or higher grade while just under 48 percent of 96 telecourse students finished in the same grade range.

The most extensive research in Freshman Composition I telecourse was undertaken in Dallas (Alger, 1976). In addition to gathering demographic information and attitude surveys from the students, the study attempted to determine if telecourses provided effective instruction by measuring increased writing skills and compared effectiveness of telecourse instruction to on-campus instruction.

In the portion of the study concerning increased writing skills, at the beginning telecourse students were asked to choose between two topics and write a composition. The students were then asked to write on the second topic at the end of the semester. Four instructors

not involved with telecourses then graded 50 pair of the essays written by randomly selected students. These instructors rated the papers on a scale from one to four, four being the highest, on each of seven criteria. The criteria were content, paper organization, paragraph organization, spelling and mechanics, word usage, diction and sentence structure, variety, and clarity. Student's names did not appear on the papers, nor were the papers labeled as to whether they were completed at the beginning or ending of the semester.

Gains were recorded in all seven categories with the overall gain averaging .3 or 12.5 percent from 2.4 to 2.7. The greatest gains were in the areas of paper organization, 30 percent; content, 24 percent; and paragraph organization, 18 percent (Alger and Linn, 1976).

The Dallas (Alger and Linn, 1976) and Tulsa (Sutterfield, 1981) studies included grade breakdown for Freshman Composition I and II telecourses and on-campus courses. The Dallas study included 3,067 on-campus and 576 telecourse students in the prerequisite course and 4,570 on-campus and 441 students in Freshman Composition II. Sixty-seven telecourse and 667 on-campus students in Freshman Composition I and 96 telecourse and 841 on-campus students in the sequential course were included in the Tulsa study. The percentage breakdown of the grades are presented in Table I.

While the non-completion rate in on-campus courses at both colleges was almost equal, the Dallas attrition rate in telecourses was much higher. Students in Dallas were required to mail in 11 assignments while Tulsa students were required to mail in five essays, the same number of essays required of on-campus students. While on-campus Freshman Composition I grades were considerably higher in

TABLE I
COMPOSITION GRADE BY MODE OF INSTRUCTION
IN DALLAS AND TULSA

Instructional Mode	Grade Range Percentage					
	A	B	C	D	F	Non-Completion
Freshman Composition I						
On-Campus						
Dallas	19	23	16	5	5	32
Tulsa	12	19	18	6	12	33
Telecourse						
Dallas	11	20	8	1	3	57
Tulsa	13	32	12	0	6	37
Freshman Composition II						
	A	B	C	D	F	Non-Completion
On-Campus						
Dallas	26	26	16	4	3	25
Tulsa	13	24	24	7	8	24
Telecourse						
Dallas	13	16	9	2	2	58
Tulsa	8	26	11	3	8	44

Dallas, the opposite was true in Tulsa. In Freshman Composition II, on-campus grades were higher in both Tulsa and Dallas. One variable that was not controlled in either study was the difference in grading standards among instructors. Unlike studies by Mount and Walters (1980) and Donsky, Vaughn, Burk, and Hite (1979), the studies were not limited to on-campus courses under the direction of the same instructor or instructors who coordinated the telecourse.

Alger (1976) expanded her study to follow the students through the second English course. Starting with 299 students who completed Composition I telecourse in the spring semester of 1975, grades were recorded for 135 students who enrolled in Composition II during the following summer and fall semesters. Using a four-point scale, the mean grade for telecourse students in Composition II was 3.0 while the average grade of 3,471 on-campus students was 2.8. Considering those students who completed the course with a grade of "D" or better as completing the course successfully, 68 percent of both the on-campus and telecourse students were successful completers. The grade distribution by percentage reported by Alger (1976) are presented in Table II. Alger concluded that the mode of instruction, on-campus or telecourse, in Composition I had little effect on the grade earned in the second course.

In summary, college credit courses aired via public or cable television have increased in availability since the mid-seventies. Technological advances predicted for the future, i.e., interactive cable and interactive systems using microcomputers and videodiscs, can provide immediate feedback to the students. Telecourse producers have used increasing sophisticated procedures in designing telecourses

TABLE II
FRESHMAN COMPOSITION II GRADE DISTRIBUTION

	A	B	<u>Grade</u> C	D	F	Non-Completion
Previous Course						
Telecourse	32	21	14	1	5	27
On-campus	25	23	16	4	4	27

Source: Linda Alger. Evaluation of the English 101 Telecourse, Writing For A Reason. Dallas, TX: Dallas Community College District, 1976, p. 44.

to meet course objectives and user needs.

The majority of available research has been directed at demographic information about students who enroll in telecourses. When compared to on-campus students, telecourse students are older, consist of a higher percentage of women, are enrolled in on-campus courses as well, have a positive attitude towards telecourses, and enrolled because of the convenience factor telecourses offer. Overall research on grades earned in telecourses compared to on-campus courses have shown that telecourse students have a higher attrition rate. When considering those who complete the course, telecourse students have earned grades comparable with on-campus students.

CHAPTER III

METHODOLOGY

This chapter details the procedures utilized for collecting and analyzing student data necessary for comparing results of Freshman Composition telecourse instruction to on-campus instruction. To meet the purpose of the study, this chapter outlines the selection of subjects used in the study, the source and nature of data obtained, and the analysis of the data.

Selection of Subjects

The subjects for this study were Tulsa Junior College students who enrolled in Freshman Composition I during the fall and spring semesters of the academic years 1980-81 and 1981-82. The study was limited to students in the telecourse sections and to students in on-campus courses taught by the same instructors who coordinated the telecourses. During that period of time, 323 enrollments were recorded in telecourses and 213 enrollments in the on-campus sections included in the study. Grade information from the sequential Composition II courses were compiled for the same group of students.

Source of Nature of Data

The source of data was a student "5A". See Appendix A for a sample copy of this form. The document is in essence a student

transcript indicating the semesters of enrollments, courses and sections taken, and grades earned by the student while attending the college. Previous hours attempted and earned and grade point information are also included.

Analysis of Data

The percentage method was used in reporting the grade distribution in Freshman Composition telecourse sections and on-campus sections. The Mann-Whitney U was utilized to compare the grade results in telecourses and on-campus sections in both Composition I and II. The Spearman-Rho was then used to determine if a significant relationship existed between the two grades.

The next step in the study was to attempt to determine if credit hours earned or grade point average achieved prior to enrolling in Composition I was predictive of the grade to be earned in telecourse sections and on-campus sections. A Spearman Rank Correlation Coefficient was prepared for both modes of instruction.

The Mann-Whitney U was once again utilized to compare the grade earned in Composition I and the grade ultimately earned in Composition II. Separate tests were prepared for telecourse and on-campus sections. The Wilcoxon-Sign Rank test was then performed to determine if there was a significant difference between the two results.

The last portion of the study attempted to determine what happened to the students who withdrew from Composition I. A frequency distribution was used to report the percentage of students falling into several groups.

CHAPTER IV

PRESENTATION AND DISCUSSION OF FINDINGS

The findings of the study are reported in this chapter. The content is divided into the following sections: Description of the Subjects, Analysis of Composition I Grade Results, Analysis of Composition II Grade Results, Enrollment Status of Unsuccessful Students, Analysis of Factors Affecting Composition I Grade Results, and Summary.

Description of the Subjects

One group used in the study consisted of students who enrolled in Freshman Composition I by telecourse during the fall and spring semesters of the 1981 and 1982 academic years. The other group used in the study was composed of students who enrolled during the specified semesters in Freshman Composition I classes taught on-campus by the same instructors who coordinated the telecourses. The on-campus classes used in the study were selected to minimize the effects of differences in grading standards between faculty members.

The study included the entire population of both groups for purposes of analyzing grade results in Composition I. Since successful completion of Composition I is a prerequisite for enrolling in Composition II and numerous students withdrew or failed the course, 198 telecourse and 160 on-campus students grades were reported for the

second course. Registration data for telecourse and on-campus students who did not successfully complete the first course were also compiled. Numbers and percentages of students falling into each category are shown in Table III.

Analysis of Composition I Grade Results

Resulting grades from Composition I instruction by telecourse and on-campus are presented in Table IV. The results are shown by letter grade of "A" through "F" for those completing the course. Those students who failed to complete the course are labeled with a "W".

On a percentage basis more telecourse students achieved "A" or "B" grades than their on-campus counterparts. Over one-half of the telecourse students received a grade of "B" or better while over 41 percent of the on-campus students fell in the same range. The largest percentage variation occurred in the "C" grade which consisted of only nine percent of the telecourse students but 27.2 percent of the on-campus students. Another large variation is evident in the "W" grade. Less than one-fifth of the on-campus students withdrew while one-third of the telecourse students did not complete the course.

If the letter grades for the completers were converted to the standard 4.00 grade point basis, the 216 telecourse completers had an average grade point average of 2.80. The 171 on-campus completers on the other hand had a grade point average of 2.41.

Analysis of Composition II Grade Results

When the Mann-Whitney U-Wilcoxon Rank Sum W Test was performed using Composition I grades for the telecourse and on-campus groups no

TABLE III

BREAKDOWN OF COMPOSITION I STUDENTS BY SUCCESSFUL OR
UNSUCCESSFUL COMPLETION BY INSTRUCTIONAL MODE

	Telecourse		On-Campus	
	N	%	N	%
Composition I Enrollment	323	100.0	213	100.0
Completed Successfully	198	61.3	160	75.1
Completed Unsuccessfully	125	38.7	53	24.9

TABLE IV

COMPOSITION I GRADE RESULTS BY INSTRUCTIONAL MODE

Grade	Telecourse		On-Campus	
	N	%	N	%
A	47	14.6	18	8.5
B	118	36.5	70	32.9
C	29	9.0	58	27.2
D	4	1.2	14	6.6
F	18	5.6	11	5.2
W	107	33.1	42	19.7
TOTAL	323	100.0	213	100.1

Mann-Whitney U Mean Rank	260.10	267.59
Z Score Corrected for Ties	0.1150	
Significant Level	0.9084	

significant difference was found. The mean rank for the telecourse group was 269.10 and 267.59 for the on-campus group. The resulting Z score corrected for ties was 0.1150 with a significance level of 0.9084.

Grade information from subsequent semesters for students who completed Composition I for credit was used for Table V. Data were compiled for 1980 telecourse students and 160 on-campus students who completed the prerequisite course with a "D" or better. Of this group, 67, or 33.8 percent, of the telecourse and 52, or 32.5 percent, of the on-campus students had not enrolled or completed Composition II when the data were gathered in the summer of 1983. Grade results for this group of students are labeled as "Unknown" in Table V.

Twenty-five percent of the students taught on-campus in Composition I and 27.8 percent of the students taught by telecourse earned a grade of "B" or above in Composition II. As with the Composition I grades, the variation in percentage of students within a specified grade range is most evident at the "C" level. Only 8.6 percent of the telecourse group fell in the "C" range while over 20 percent of the on-campus group did.

Again the withdrawal rate was greater for the telecourse group, 24.7 percent of the telecourse students compared to 13.8 percent for on-campus students. At the time of the study, 83 of 198, or 41.9 percent, of the telecourse students had completed Composition II compared to 86 of 160, or 53.8 percent, of the on-campus students.

Using a 4.0 grade point average scale, the 83 television students who had completed Composition II had earned an average of 2.67. The average grade point for the on-campus students was 2.44.

TABLE V
COMPOSITION II GRADES FOR STUDENTS SUCCESSFULLY
COMPLETING COMPOSITION I BY
INSTRUCTIONAL MODE

Composition II Grade Results	Telecourse Composition I		On-Campus Composition I	
	N	%	N	%
A	17	8.6	16	10.0
B	38	19.2	24	15.0
C	17	8.6	33	20.6
D	6	3.0	8	5.0
F	5	2.5	5	3.1
W	49	24.7	22	13.8
Unknown	66	33.3	52	32.5
TOTAL	198	99.9	160	100.0
Mann-Whitney U Mean Rank		255.96	287.51	
Z Score Corrected for Ties		2.5380		
Significance Level		0.0111		

Again the Mann-Whitney U-Wilcoxon Rank Sums Test was applied comparing all students in both groups, not just those who successfully completed Composition I. The mean rank for the telecourse group was 255.96 while the on-campus group was 287.51. The Z score corrected for ties was 2.5380 at the significance level of 0.0111. The comparison was affected by the higher withdrawal rate in the telecourse group. The higher withdrawal rate of the telecourse group continued to be evident in the second course. Almost one-fourth of the telecourse group withdrew from the first course in contrast to 12.8 percent of the on-campus group.

Composition II grade results for telecourse and on-campus students are included in the next four tables; however, the tables have been separated by the grade earned in Composition I. Displayed in Table VI are the resulting grades earned in the continuation course by those students who had an "A" in Composition I. Over half of the students in both groups had completed Composition II for credit. The percentage of students earning "A's" or "B's" were almost the same in both groups. Over one-fourth of the telecourse students experienced a drop of a letter grade or more from Composition I while only 11.1 percent of the on-campus students experienced a grade drop.

Over one-fourth of telecourse students who earned "B's" in Composition I earned an equitable or better grade in the second course. As shown in Table VII, 30.0 percent of the on-campus students accomplished the same feat. Almost 60 percent of the telecourse "B" student had not completed the course for credit while 44.4 percent of the on-campus students had not.

TABLE VI
COMPOSITION II GRADE RESULTS FOR STUDENTS WITH
AN "A" GRADE IN COMPOSITION I
BY INSTRUCTIONAL MODE

Composition II Grade Results	Telecourse		On-Campus	
	N	%	N	%
A	12	25.5	8	44.4
B	10	21.3	2	11.1
C	2	4.3	0	-
D	0	-	0	-
F	0	-	0	-
W	7	14.9	4	22.2
Unknown	16	34.0	4	22.2
TOTAL	47	100.0	18	99.9

TABLE VII
COMPOSITION II GRADE RESULTS FOR STUDENTS WITH
A "B" GRADE IN COMPOSITION I
BY INSTRUCTIONAL MODE

Composition II Grade Results	Telecourse		On-Campus	
	N	%	N	%
A	5	4.2	7	10.0
B	27	22.9	14	20.0
C	11	9.3	18	25.7
D	3	2.5	1	1.4
F	2	1.7	2	2.9
W	28	23.7	11	15.7
Unknown	42	35.6	17	24.3
TOTAL	118	99.9	70	100.0

As indicated by data in Table VIII, "C" level telecourse students were less successful than on-campus students in repeating or improving their Composition I grade in the second course. A little over 17 percent of the telecourse students retained or improved upon their previous grade while over twice that amount, 37.9 percent, of the on-campus students did so. The withdrawal rate for telecourse students was much higher than the on-campus group, 27.6 percent compared to 8.6 percent.

The comparison of "D" students in Table IX was inconclusive since none of the telecourse students had attempted Composition II. Three on-campus students had completed the second course with one each earning a "B", "C", or "D".

In all, 82 telecourse and 86 on-campus students had completed Composition II for credit at the end of the study. Based upon the 198 telecourse and 160 on-campus students who satisfied the course prerequisite, 41.4 percent of the telecourse group and 53.75 percent of the on-campus group had earned an "A" through a "D". No student in either group had failed the second course. Forty-nine, or almost one in four, telecourse students earned the same or a higher grade in Composition II than in Composition I. Fifty-four, or one in three, of the on-campus group retained the same or earned a higher grade.

A Spearman Correlation Coefficient was calculated for the telecourses and on-campus groups separately to determine if a significant relationship existed between the Composition I and Composition II grades. The correlation coefficient for the telecourse group was .4681 and for the on-campus group was .5150.

TABLE VIII
COMPOSITION II GRADE RESULTS FOR STUDENTS WITH
A "C" GRADE IN COMPOSITION I
BY INSTRUCTIONAL MODE

Composition II Grade Results	Telecourse		On-Campus	
	N	%	N	%
A	0	-	1	1.7
B	1	3.4	7	12.1
C	4	13.8	14	24.1
D	3	10.3	6	10.3
F	3	10.3	3	5.2
W	8	27.6	5	8.6
Unknown	10	34.5	22	37.9
TOTAL	29	99.9	58	99.9

TABLE IX
COMPOSITION II GRADE RESULTS FOR STUDENTS WITH
A "D" GRADE IN COMPOSITION I
BY INSTRUCTIONAL MODE

Composition II Grade Results	Telecourse		On-Campus	
	N	%	N	%
A	0	-	0	-
B	0	-	1	7.1
C	0	-	1	7.1
D	0	-	1	7.1
F	0	-	0	-
W	0	-	0	-
Unknown	4	100.0	11	78.6
TOTAL	4	100.0	14	99.9

Enrollment Status of Unsuccessful Students

The following semester enrollment statistics for the students who were unsuccessful in their first attempt in Composition I are presented in Tables X and XI. Of the 18 students who failed the telecourse composition course, half were placed on academic probation and chose not to re-enroll. Three re-enrolled and successfully completed either an on-campus composition course or another on-campus course. One-fourth of the students who withdrew from the first course re-enrolled in Composition I with 11 of the 27 completing the course successfully. Another 20 percent re-enrolled and successfully completed a course other than composition.

As shown in Table XI, a higher percentage of the unsuccessful on-campus students than telecourse students chose not to re-enroll. Of the 125 telecourse students, 46.4 percent terminated their enrollments while 52.8 percent of the on-campus students did not re-enroll. Almost 24 percent of the on-campus students successfully completed a course during the subsequent semester with half having taken Composition I again. Over 28 percent of the telecourse students accomplished the same feat.

Factors Affecting Composition I Grade Results

Grade point averages established by students before enrolling in Composition I are presented in Table XII. Almost half of the telecourse students and over 70 percent of the on-campus students had not established a grade point average before enrolling in the courses in the study.

TABLE X

ENROLLMENT STATUS FOR THE FOLLOWING SEMESTER
FOR STUDENTS UNSUCCESSFUL IN
COMPOSITION I TELECOURSE

	Composition I Grade			
	F		W	
	N	%	N	%
Re-enrolled in Composition I:				
Successful Telecourse			2	1.9
Successful On-Campus	1	5.6	9	8.4
Unsuccessful Telecourse			4	3.7
Unsuccessful On-Campus			11	10.3
Grade Unknown			1	0.9
Re-enrolled in other course(s):				
Successful Telecourse			1	0.9
Successful On-Campus	2	11.1	21	19.6
Unsuccessful Telecourse	1	5.6	9	8.4
Unsuccessful On-Campus	4	22.2		
Grade Unknown	1	5.6		
Enrollment Terminated:				
Student Dropped-Out			27	25.2
Academic Probation	9	50.0	21	19.6
Academic Suspension			1	0.9
TOTAL:	18	100.1	107	99.8

TABLE XI
ENROLLMENT STATUS FOR THE FOLLOWING SEMESTER
FOR STUDENTS UNSUCCESSFUL IN
COMPOSITION I ON-CAMPUS

	Composition I Grade			
	N	F %	N	W %
Re-enrolled in Composition I:				
Successful Telecourse	1	9.1		
Successful On-Campus			4	9.5
Unsuccessful Telecourse				
Unsuccessful On-Campus	1	9.1	9	21.4
Grade Unknown				
Re-enrolled in other courses(s):				
Successful Telecourse				
Successful On-Campus	1	9.1	4	9.5
Unsuccessful Telecourse				
Unsuccessful On-Campus			5	11.9
Grade Unknown				
Enrollment Terminated:				
Student Dropped-Out	1	9.1	9	21.4
Academic Probation	7	63.6	10	23.8
Academic Suspension			1	2.4
TOTAL:	11	100.0	42	99.9

TABLE XII
ESTABLISHED GRADE POINT AVERAGES PRIOR TO
ENROLLING IN COMPOSITION I
BY INSTRUCTIONAL MODE

Established G.P.A.	Telecourse		On-Campus	
	N	%	N	%
0	159	49.2	151	70.9
.01 - .99	7	2.2	6	2.8
1.00 - 1.99	32	9.9	8	3.8
2.00 - 2.99	45	13.9	32	10.3
3.00 - 3.99	59	18.3	22	10.3
4.00	<u>21</u>	<u>6.5</u>	<u>4</u>	<u>1.9</u>
TOTAL	323	100.0	213	100.0
<hr/>				
Spearman Correlation Coefficient		0.1507	0.0798	
Significance Level		0.003	0.123	

A Spearman's Rank Correlation Coefficient to determine if a relationship existed between grade point average and Composition I grades was calculated for both the telecourse and on-campus groups. The correlation coefficient in both cases was low, .1507 at a significant level of .003 for telecourses and .0798 at a .123 significance level for on-campus students.

A breakdown of the hours attempted by the telecourse and on-campus students is presented in Table XIII. Once again the percentage of on-campus students who had no previous college experience exceeded the telecourse percentage. The Spearman Rank Correlation Coefficient seeking a relationship between hours attempted and Composition I grades for telecourse students was .053 and -.024. The large percentage of beginning college students in both groups may have clouded the results.

The separation of the telecourse and on-campus groups into two age groups, those 26 and older and those 25 and younger, is shown in Table XIV. The age composition of the two groups approached being the reverse of each other. Over 70 percent of the telecourse students fell into the older group while over 74 percent of the on-campus group were in the younger group.

A Mann-Whitney U compared the Composition I grade results for the younger and older group for telecourse and the on-campus groups. No significant difference was found in the on-campus group with a Z score of -0.0092; however, a significant difference did occur in the telecourse group. The resulting Z score was -3.2478 at a significance level of .0012 with the older group out performing the younger.

TABLE XIII
HOURS ATTEMPTED BY STUDENTS PREVIOUSLY TO
ENROLLING IN COMPOSITION I
BY INSTRUCTIONAL MODE

Hours Attempted	Telecourse		On-Campus	
	N	%	N	%
0	147	45.5	145	68.1
1 - 29	149	46.1	56	26.3
30 - 59	23	7.1	10	4.7
60 +	<u>4</u>	<u>1.2</u>	<u>2</u>	<u>0.9</u>
TOTAL	323	100.0	213	100.0
<hr/>				
Spearman Correlation Coefficient		0.0533	-0.0249	
Significance Level		.170	.359	

TABLE XIV
AGE GROUP DISTRIBUTION OF STUDENTS ENROLLED IN
TELECOURSE AND ON-CAMPUS COMPOSITION I
BY INSTRUCTIONAL MODE

	Telecourse		Mean Rank	On-Campus		Mean Rank
	N	%		N	%	
26 or Older	228	70.6	172.40	55	25.8	106.94
25 or Younger	<u>95</u>	<u>29.4</u>	137.05	<u>158</u>	<u>74.2</u>	107.02
TOTAL	323	100.0		213	100.0	
<hr/>						
Z Score Corrected for Ties		-3.2478			-0.0092	
Significance Level		0.0012			0.9927	

Summary

In summary, major differences in grade results between telecourse and on-campus courses occurred because of the higher attrition rate in the telecourse Composition I and II. A higher percentage of on-campus students earned grades in the "C" range which may have indicated that telecourse students in that range withdrew rather than completing the semester. While no significant difference was found between the two instructional groups in Composition I, significant difference was found between the two groups in Composition II when all students including those who withdrew were considered. When computing a mean grade average based upon only completers, telecourse students performed better than on-campus students. A higher percentage of the on-campus group than the telecourse group terminated their enrollment after failing or withdrawing from Composition I. A higher percentages of telecourse students successfully completed a course or courses during the subsequent semesters than on-campus students.

No significant relationships were found between the Composition I grade results and established grade point average or hours attempted. However, a comparison by age group within the telecourse group, indicated older students performed significantly better than younger students. The same comparison within the on-campus group resulted in no significant difference.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The content of this chapter is divided into three sections. The first section is a summary of the study. Conclusions of the study are presented next. The last section consists of recommendations for further research and practice.

Summary

The purpose of this study was to compare the grades earned by students in telecourse and on-campus Freshman Composition I and the grades earned by the same groups in Composition II. The study was undertaken to answer the following questions.

1. What grades were earned by Freshman Composition I telecourse students and how do those grades compare to grades earned by on-campus students?
2. What was the mean grade earned by on-campus Freshman Composition I students in courses taught by the same instructors who coordinated telecourses and the mean grade earned by the telecourse students?
3. How did grades earned in the second course by students in the telecourse group compare to those earned in the on-campus group?
4. Was there a relationship between the grades earned in Freshman Composition I and Composition II?

5. Did students who withdrew from or failed composition initially re-enroll in composition or other courses at Tulsa Junior College?

6. Was there a correlation between the established grade point average and the grade earned in Composition I?

7. Was the grades earned in Composition I affected by the number of college hours previously completed by the students?

8. Did student age affect the grade earned in Composition I?

The subjects for this study were students enrolled in Freshman Composition I during the fall and spring semesters during 1980 through 1982. The study was focused on students enrolled in telecourse sections and in on-campus sections taught by the same instructors who coordinated the telecourses.

The data was compiled from student "5A's". Data included demographic descriptions, grade results and course selection choice.

Data were arranged into frequency distributions for both the telecourse and on-campus groups. Statistical tools used to compare the groups and to determine correlation were the Mann-Whitney U and Spearman-Rho.

Conclusions

The conclusions of the study follow. Findings are listed after each question the study sought to answer.

1. What grades were earned by Freshman Composition I telecourse students and how do those grades compare to grades earned by on-campus students? There was no significant difference in the mean rank between the Composition I grades earned by the telecourse group and the on-campus group.

2. What was the mean grade earned by on-campus Freshman Composition I students in courses taught by the same instructors who coordinated telecourses and the mean grade earned by telecourse students?

Telecourse students who completed Composition I earned a grade point average of 2.80 while the on-campus group earned a grade point average of 2.41.

3. How did grades earned in the second course by students in the telecourse group compare to those earned in the on-campus group?

Although the telecourse students who completed Composition II earned a higher mean grade point than the on-campus group, the attrition rate in the telecourse group was much higher. When including all students in a comparison study, there was a significant difference between the grades earned in the two groups.

4. Was there a relationship between the grades earned in Freshman Composition I and Composition II? No significant relationship was found between the grade earned in prerequisite course and the continuation course.

5. Did students who withdrew from or failed composition initially re-enroll in composition or other courses at Tulsa Junior College? Fifty-three percent of the telecourse group and 41 percent of the on-campus group continued their enrollments during the following semesters. Twenty-eight of the telecourse and 24 percent of the on-campus students completed their subsequent course successfully.

6. Was there a correlation between the established grade point average and the grade earned in Composition I? No significant correlation was found between the established grade point average and the Composition I grade in either the telecourse or on-campus group.

7. Were the grades earned in Composition I affected by the number of college hours previously completed by the students? A significant correlation did not exist between previous college hours attempted and the composition grade in the telecourse or on-campus group.

8. Did student age affect the grade earned in Composition I? Age made no significant difference in the grade outcomes for on-campus students. There was a significant difference between age groups in the telecourse group. Students 26 or over performed better than students 25 or younger.

Recommendations for Practice

The study indicated that differences in grades earned by telecourse students who completed the semester were not significantly different from the grades earned by on-campus students. The major difference between the two groups was in the withdrawal rate. The following practices could reduce the withdrawal rate.

1. Students could be given an English placement test to determine whether they have the necessary skills or competencies for the course. Those with deficiencies could be encouraged to take developmental courses.

2. Students could be evaluated to determine their learning style. While some students can thrive with little personal contact with the instructors, other students may benefit from the contact and should be counseled into on-campus courses.

3. Determining the most prevalent times for withdrawals might indicate the timing for scheduling additional on-campus sessions to

help students, thereby reducing the withdrawal rate.

4. Establishing an English or writing laboratory staffed by para-professionals for extended hours particularly in the evenings could be beneficial to the students.

5. Utilizing an interactive video and personal computer system could provide students with extra tutorial opportunities.

Recommendations for Future Study

The findings of this study raised some additional questions as well as suggesting ways in which this study could be improved. Recommendations for future study are as follows:

1. A better research design for measuring achievement of telecourse and on-campus groups would be to pretest and posttest both groups. This would allow measurement of the changes in achievement level for both groups.

2. A higher percentage of telecourse students were female and older than on-campus students. An attitude or personality survey could indicate whether those factors had significance in the difference in performance between the two groups.

3. Telecourses seem more conducive to students who have a high level of self-directed learning. However, the review of available literature did not uncover research indicating a relationship between the success rate in telecourses and the level of self-directed learning skills students possess.

4. Telecourse are via two different systems, cable delivery providing six to seven broadcasts per program and educational television utilizing two broadcasts per program. A comparison of student grade

results could indicate whether a relationship exists between the number of broadcasts and achievement levels.

5. A lower percentage of telecourse students earned grades in the "C" range while a higher percentage withdrew. An analysis of student grades at the time of withdraw could provide an indication as to whether attrition is higher for students in that grade range.

6. Telecourse students are older than on-campus students. Further study of demographic data could indicate what percentage of the telecourse students were "stop-outs", students who returned to college after an interruption in their enrollments.

7. Limited group sessions in telecourses decrease the opportunity for interaction between students and diminish the likelihood of development of student social support groups. A study could be conducted to review the results in grade and attrition within a telecourse group that has undergone attempts at social orientation, network building, or creation of support/study groups.

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APPENDIX

----- HIGH-SCHOOL -----

591	1	81	BUS	1053	TV01	INTRO BUSINESS	3.0	B
592	1	81	ENG	1113	TV02	FRESH COMP 1	3.0	B
593	1	81	HIS	1483	TV04	US TO 1865	3.0	W
	1	81	HRS ATT	6.0	EARN	6.0 QPTS	18.0	GPA 3.00
			TOTL HRS ATT	6.0	EARN	6.0 QPTS	18.0	GPA 3.00
594	2	81	ENG	1213	A939	FRESH COMP 2	3.0	A
595	2	81	HIS	1493	A985	US FROM 1865	3.0	B
596	2	81	PSY	1113	B003	GENERAL PSYCH	3.0	B
	2	81	HRS ATT	9.0	EARN	9.0 QPTS	30.0	GPA 3.33
			TOTL HRS ATT	15.0	EARN	15.0 QPTS	48.0	GPA 3.20
597	3	81	POS	1113	PS83	AMER FED GOVT	3.0	B
598	3	81	SOC	1113	SS16	INTRO/SOCIOLOG	3.0	A
	3	81	HRS ATT	6.0	EARN	6.0 QPTS	21.0	GPA 3.50
			TOTL HRS ATT	21.0	EARN	21.0 QPTS	69.0	GPA 3.28
599	1	82	BIO	1114	0707	GEN BIOLOGY	4.0	W
601	1	82	ECO	2013	1842	ECON SOC/ISSUE	3.0	WP
	1	82	HRS ATT	0.0	EARN	0.0 QPTS	0.0	GPA 0.00
			TOTL HRS ATT	21.0	EARN	21.0 QPTS	69.0	GPA 3.28

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VITA

Anita Jane Fleming

Candidate for the Degree of
Doctor of Education

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TELECOURSE AND ON-CAMPUS

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